PHENIX

Technical Support 2007

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WEEKLY PLANNING

7/19/2007

Don Lynch

2007 Summer Shutdown Schedule

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Item	Start	Complete
RPC Factory set up	Started	2011?
HBD West repair	Started	9/14
MuID collar removal, MMS move S.	Done	Done
Disconnect EC and Move to AH	Done	Done
C-A fold scaffolding, remove lift & ladder, disconnect gas sniffers	Done	Done
PHENIX techs disconnect water, elect., gas, fibers, RXNP blue cable		
Mike Rau remove lift wiring, disconnectTOF blower	Done	Done
Move EC to AH	Done	Done

Note: C-A Cooling water improvements are planned for this summer. This may involve interuption of water cooling for most/all of the summer. Please let me know if water cooling is necessary for any subsystem operations this summer.

2007 Summer Shutdown Schedule

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RPC Engineers coordination visit	7/20	7/20
Reconnect EC for maintenance in AH	Done	Done
Move MuID collar to AH	7/18	7/18
Misc. Subsystem Maint./repair/Upgrade	7/18	10/1
Misc. Infrastructure Improvements	7/18	10/1
Install IR floor plates, rolling cart & move manlift to IR	Done	Done
Remove MPC South (permit needed)	7/20	7/27
MPC South upgrade/ bench tests	7/30	8/13
Move CM south	7/30	7/30
Remove SouthEast Vertical Lampshade	7/24	7/24
Remove MPC North (wp needed)	7/31	7/31
MPC North upgrade/bench tests	7/30	8/6
MuTr Capacitor Decap (wp needed))	Started	8/31

2007 Summer Shutdown Schedule (cont'd)

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Item	Start	Complete
Remove HBD East	8/6	8/10
Reinstall MPC North (wp needed)	8/6	8/13
MuTr FEE Prototype (Sta. 2N lwr oct.)	8/6	9/20
DOE Safety Audit (preliminary)	8/6	8/7
Install CM access ladder (wp needed)	8/13	8/17
Move CM North	8/13	8/13
Repair RXNP Phototube	8/13	8/20
Summer Sunday Tour	8/15	8/21
DOE Safety Audit (intensive)	8/20	8/31
Install CM Crane	postponed to 2008	
C-A arc flash work (no power)	8/23	8/24
HBD West Mechanical/Gas Reinstall	9/17	9/24
HBD EAST Mechanical/Gas Reinstall	9/24	10/1
HBD Electrical Reinstall	9/17	10/8
Reinstall MPC South	9/20	9/26
EC Roll In	10/8	10/10
DC East repair	10/11	10/12
HBD/MPC/Other TBD Commissioning	10/1	10/31
Start of Run 8	11/1	11/1

CM Ladder/Stair

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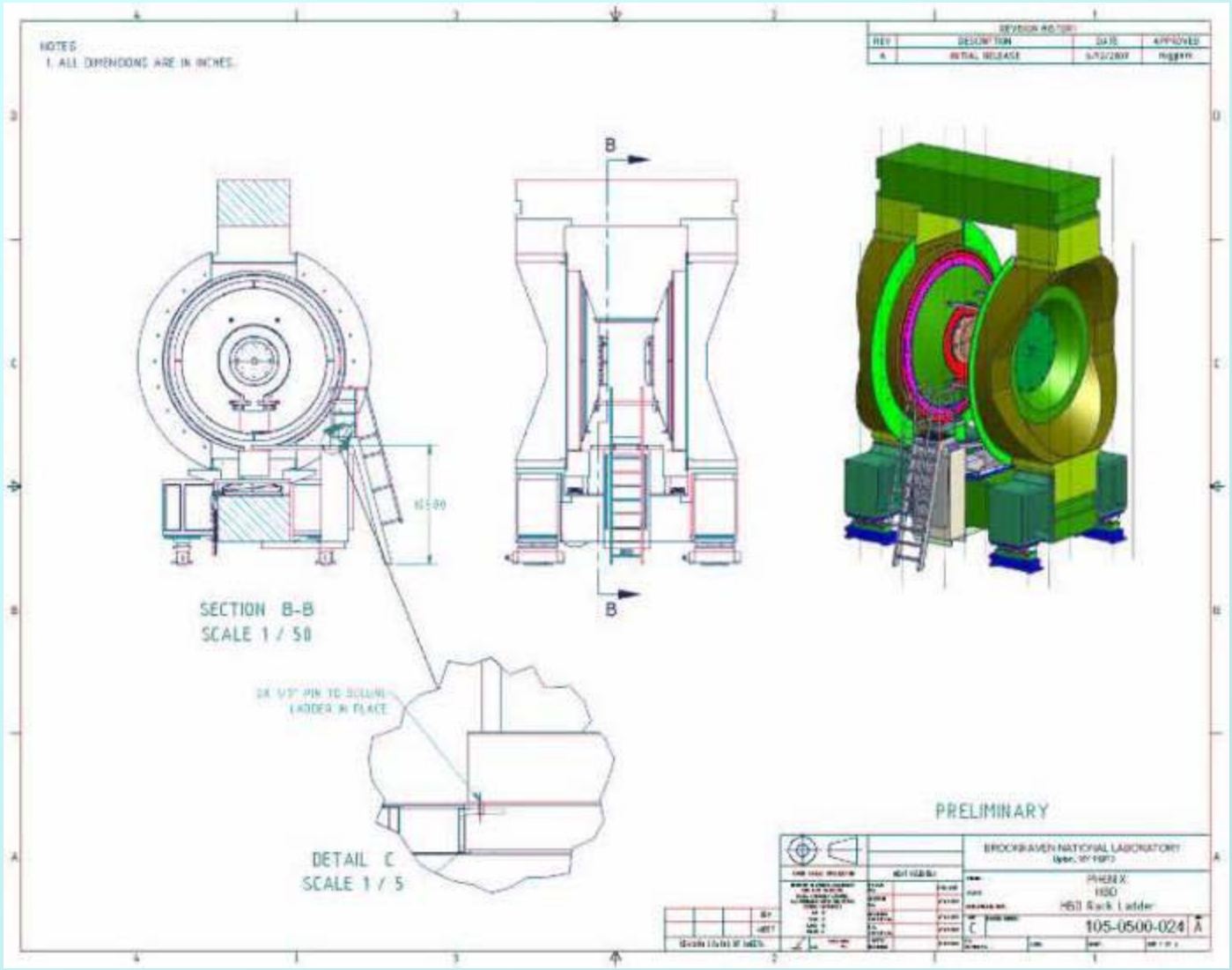

- PO written waiting approval
- To be used during shutdown (EC out) only.
- Alternate custom ladder needed for CM access during run *West side has best access*
- Designs to be reviewed by CA Safety

Station 1 access plan

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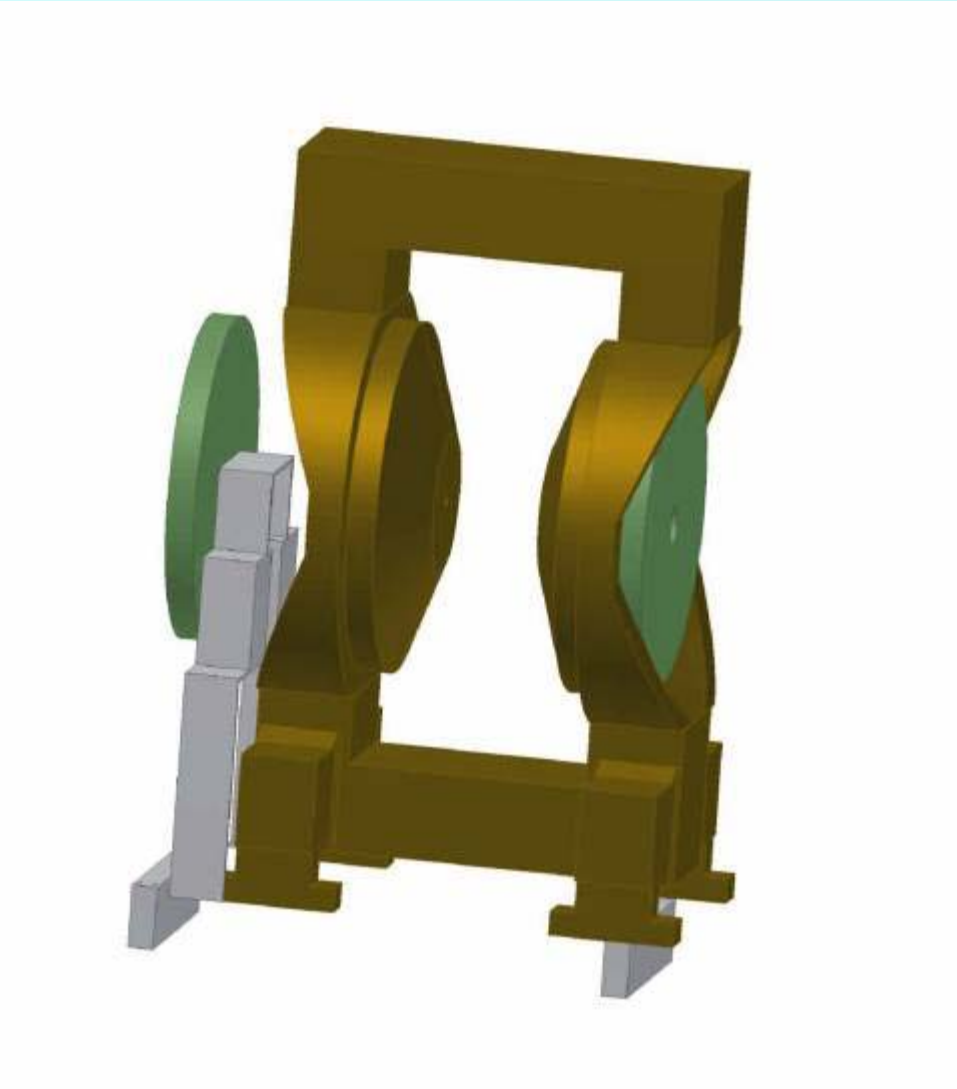

Preliminary Design Concept:

3 levels

Bottom level just below Station 1

Mid level 2 pcs just below MPC cavity

Top level over the beam pipe just above MPC cavity

RPC Factory

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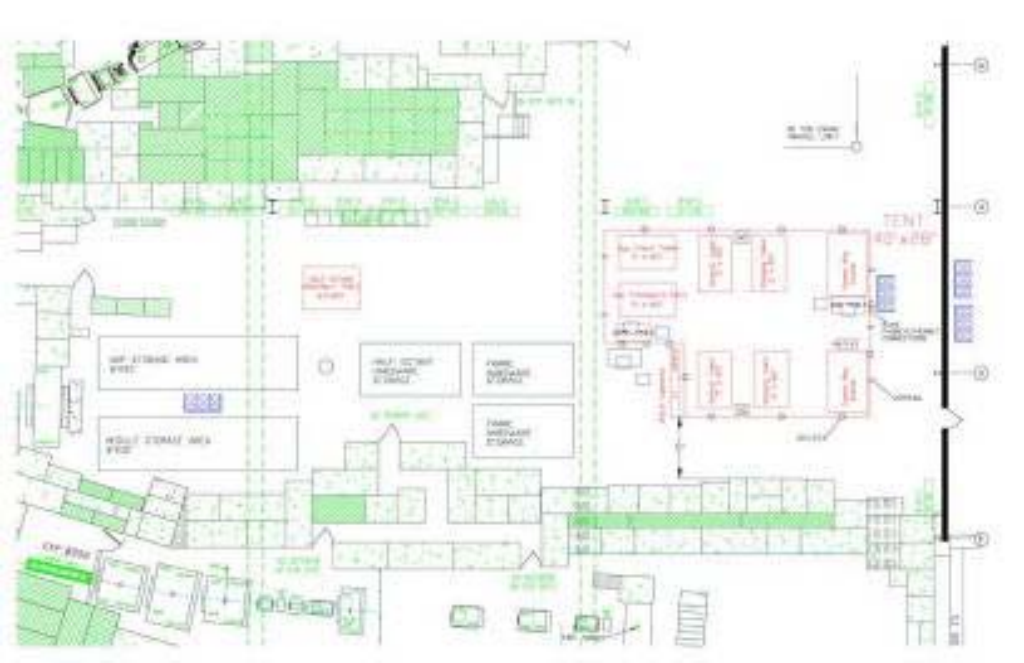

Stop Work order has been cleared. Please make sure that all work in 912 is properly planned and approved. If in doubt consult with Don Lynch or Paul Giannotti.

RPC Factory Issues

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A. Factory Set Up:

1. PHENIX tech support:

   Gas: John T.

   Elect: Frank T.

   Mech: Kenny J.

2. Electrical work moving forward.

3. Tent to be cleaned, floor painted and tent secured

4. HVAC specs 18,000 BTU AC

   4 HEPA filters, internally recirculated

5. Gas distribution design TBD

B. Safety Issues: Per Yousef's Minutes from review

- Calib./testing of SF6 monitors
- Gas system schematic in progress
- Gas system construction after approval
- Fire protection *Paul to consult with Joe Lavesques*
- Gas environmental impact *Ralf update review numbers when gas system design is complete*
- Electronics/equipment review
- Factory users safety manual *interim Worker plan complete; final productiuon version needed*

C. Factory Equipment

- Design & Fabrication (cosmic ray test stand) *Ali has suggestions*
- Layout & installation shelves & cranes *not going to use jib crane, Riggers will set up A-frame*

RPC Mockup

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Ready for action.
Mockup Test Fit Tomorrow

Other Work

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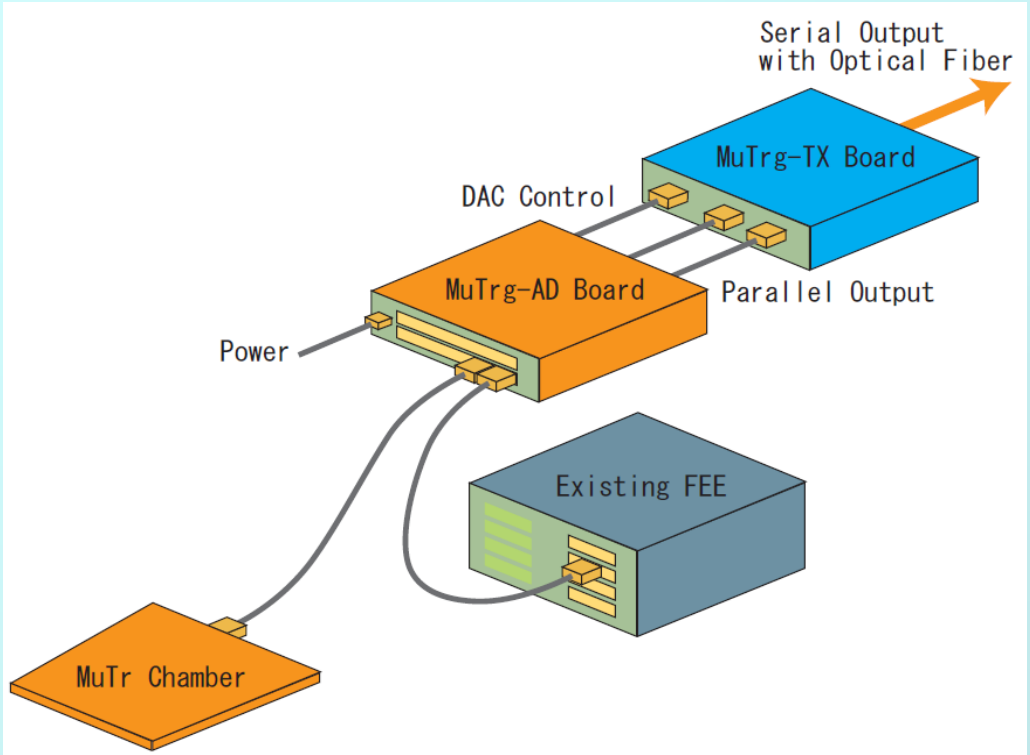
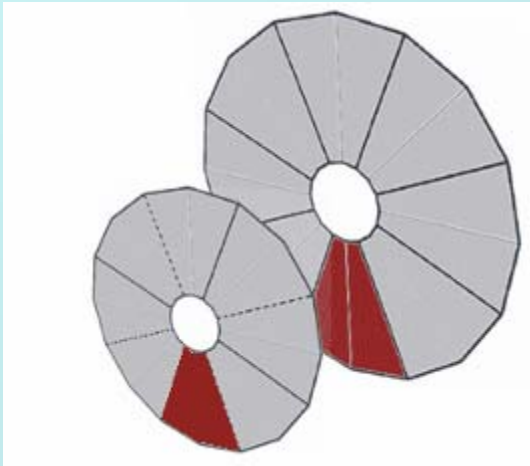
- Empty (except clean metal waste) and discard old container
- VTX prototype
- NCC prototype & electronics

- Neutron shielding test
  - No Plan Yet

MuTr FEE Upgrade Prototype





Station 2:
5 AD board Chassises
3 TX board Chassises

Station 1:
3 AD-Board Chassises
2 TX-Board Chassises

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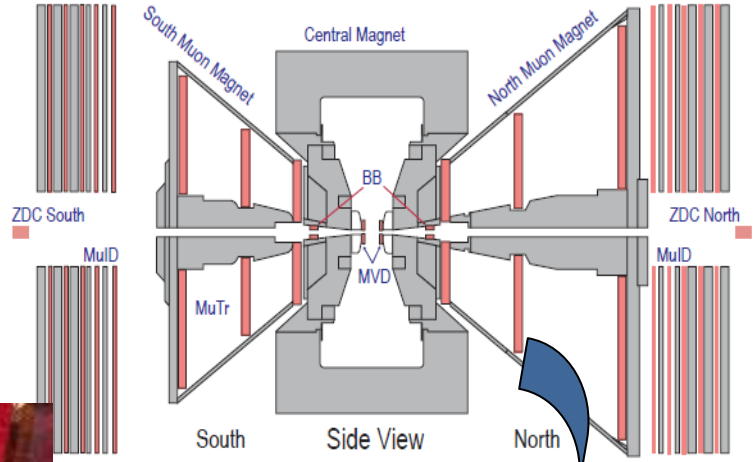
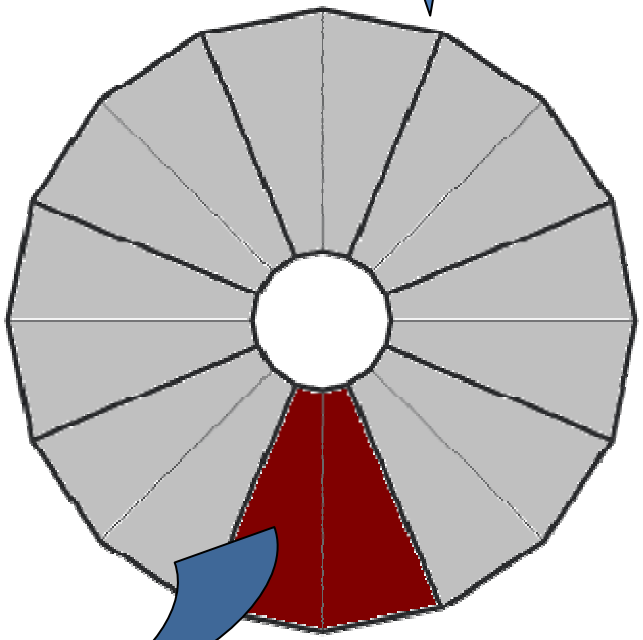
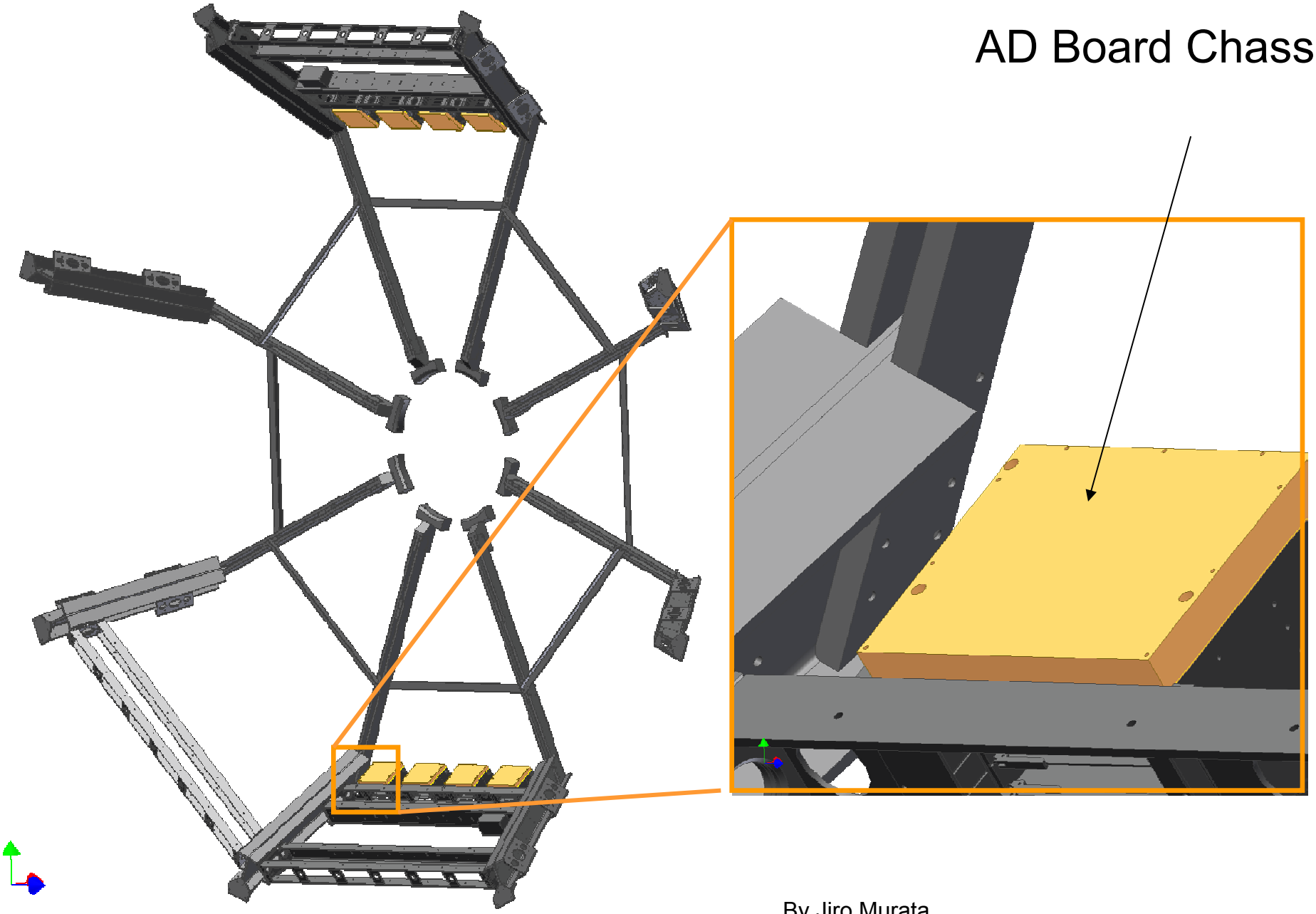
Station-2

- 5 AD board Chassises
- 3 TX board Chassises



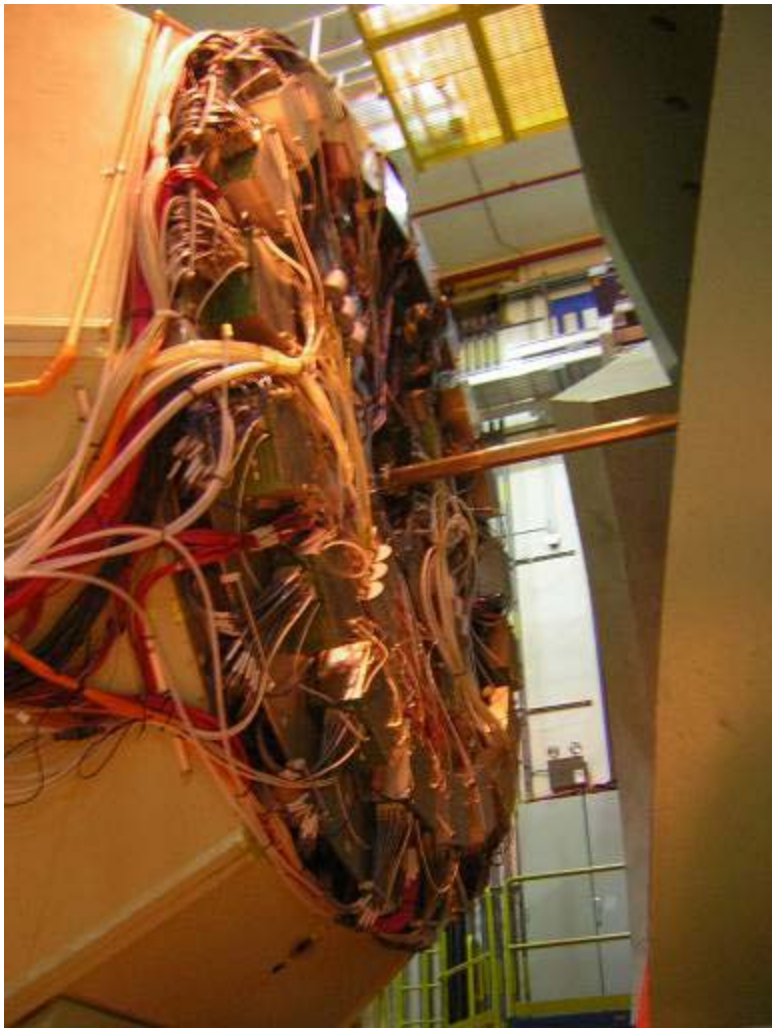


AD Board Chassis



By Jiro Murata

Station-1



3 AD-Board Chassises
2 TX-Board Chassises

Need to be accessible
to St-1during test period

Need Man Lift

No plan how to mount yet

Hardware Requirements

- MuID North + MuTR North (No Magnetic-field at all)
- Gas :
  - Phase-I : 8/14 - 8/23
    - MuID : CO_2
    - MuTR: Ar + CO2
  - Phase-II: 8/23 - 9/10
    - MuID : CO_2 + C_4H_{10} (recirculation mode)
    - MuTR: CF_4 + Ar + CO_2 (recirculation mode)
- Dry N_2: not much flow
  - Manifold + 1/4 inch tubes
- Cooling Water : not much flow
  - Manifold + 1/4 inch tubes
- Power :
  - Install 8 AD & 8 TX boards
    - 102W = 8 * 9.4W(AD) + 8 * 3.4W(TX)
  - Power from MuTr LV module
    - unused 12ch (7.5V * 4A = 30W/ch)
    - LV cable * 12 pairs. LV module->Octant.7 (st-1,st-2).

Schedule

- Prior to 8/6: Approval & Permits
- Aug.6 : Preparation for Installation
- Aug.13 : Start Installation

Phase-I

- Aug.16 : Debugging
- Aug.23 : Production data taking.
- Sept.10~20 : Finish data taking

Phase-II

- Sept.10~20 : Start Uninstall
- After 9/10: Test MuTr for unintended damage

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Safety Note:

1. There is a DOE ISM audit in August, please schedule cleanup periods for your spaces and your offices. The first thing they will see is the condition of our facility and get a first impression from that. Cleaning the area should also be done at the end of each job during the shutdown. The criteria should be that the area looks cleaner when the job is done than it looked before the job started.

2. Definition of **worker planned work - we all need to be able to explain this when the DOE auditor talks to us:**

This term has replaced "skill of the craft" for work planning at BNL. Worker planned work is more descriptive of what is actually always done. All work is planned whether documented on a green permit or not.

Worker planned work includes:
1. Doing work that does not need a green work permit

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2. As an individual worker, personally reviewing the guideline items on summarized below:

What hazards are present for this job?
Is my supervisor or work planner aware of the hazards?
What part of this job concerns me? Have I asked for help?
What training/knowledge is needed to do the job safely?
Why do/don't people get hurt in my Group?
What is the safety climate at PHENIX?
What are standards for safety PHENIX (intended & actual)?
What needs to be improved here?
Where are the danger zones for this job? What could go wrong?
What did the pre-job briefing and/or job-site walk-down cover?
Would more written procedures help me with my job?
Do I feel you have adequate tools and PPE for this job?

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Pre-job Briefing Questions I Asked Myself Before I Started Work:

What are the hazards for this particular work? How will I control them?
What are the critical steps to complete this work safely?
What can go wrong? What do I do if something goes wrong?
What actions do I take if a new hazard is encountered while I am working?

Job-Site Walk-down I Did Before I Started Work:

I thoroughly examined the job site
I ensured all hazards were identified and controls were adequate
I ensured that my work did not affect other operations, and conversely
I ensured the risk level was low and I based this on job complexity, coordination need between groups and hazards for the work

Post-Job Feedback I Will Give to My Supervisor:

Task was/was not accomplished with expected results
Procedures and work documents were/were not accurate
Work planning and scheduling was/was not optimized to reduce human error or re-work
Job-site resources and information were/were not sufficient
My training for the job was/was not appropriate

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5 Year Plan

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2007	HBD Repairs, DC (minor) repairs), MPC N&S upgrade,MuTr FEE upgrade prototype, infrastructure upgrades & repairs, misc. subsystem work
2008	MuTr FEE upgrades 1 octant 1&2 S, Cu absorber test, RPC3 S, infrastructure upgrades & repairs, misc. subsystem work
2009	Scaffolding in MMS and MMN, MuTr FEE N&S stn. 2 & 3, MuTr N&S stn. 2 & 3 repairs, RPC2 S&N, RPC3 N, Cu absorbers, infrastructure upgrades & repairs, misc. subsystem work
2010	Remove HBD & RXNP, remove beampipe, DC West upgrade, VTX barrel, RPC1 N&S, MuTr FEE stn. 1 N&S, MuTr stn. 1 N&S repairs, infrastructure upgrades & repairs, misc. subsystem work
2011	NCC S, FVTX, infrastructure upgrades & repairs, misc. subsystem work
2012	NCC N, upgrades contingency & wishlist, infrastructure upgrades & repairs, misc. subsystem work

** Years refer to the shutdown year and follow the run with the similar number (i.e. work in 2007 is to be done in the shutdown that follows run 7, and so on)*

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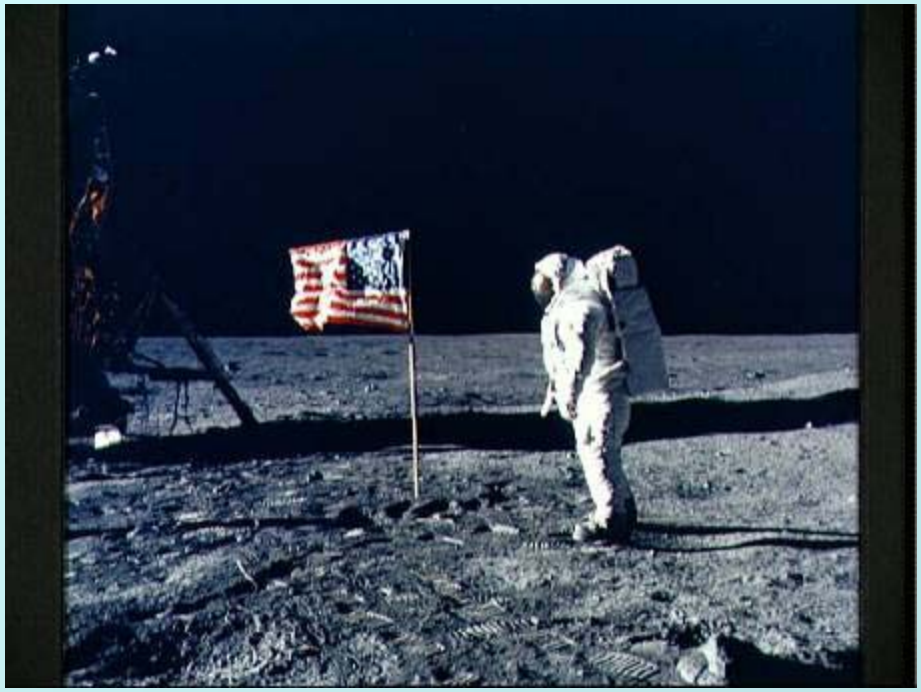
Where To Find PHENIX Technical Info



Links for the weekly planning meeting slides, long term planning, pictures, videos and other technical info can be found on the web site:

http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm